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English and citizenship unless every facility be provided for learning these and fitting himself for citizenship. It is, however, true that our schools will remain empty, even with compulsory education laws, as in Massachusetts, that our citizenship preparation and examinations will remain in most instances a political farce, until industries make American citizenship their immediate responsibility.

This done, I think we shall find that we need a second melting pot—the civilian training camp. We have found that the industry creates an immigrant colony, and class and social distinctions. The workmen frequently never meet or shake hands with a “real American.” The day’s drill, the camp drudgery, washing the dust off alongside a stream, the dog tent, with their magnificent opportunity for formal team work and informal fellowship may supply the melting pot we have missed. They will certainly give back to industry men of greater value as workmen, and to the country incomparably better citizens.

SOME IMPROVEMENTS IN EXISTING TRAINING SYSTEMS

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“When in doubt blame the public schools.” It is a much easier thing to do and one gets so much larger an audience than when we take up the question—“How about our own training systems in business?” The fact that there is already some appreciation of the need of comprehensive training systems in business, is excuse for the prophecy that they will find their definite and proper place.

Of course some still insist that their training work is only temporary because of the failure of this or that agency to furnish the necessary supply of trained employees. But there are others, and we are finding them more frequently in business today who are constructively answering the question—“Is there not now and will there not always be definite training work for business which

will have to be undertaken in business by business people?" They are answering the question by analysis of the needs of their particular organization, then building upon varying individual educational foundations by extending (not duplicating) the efforts of other educational agencies.

No training system will function properly unless it is built upon a clean-cut realization of the particular needs it is designed to meet. Woe be unto the system which exists because "we want to do something nice for our young folks." It sounds well to be able to say "Oh, yes, we have a school"—but is it delivering the goods? A training system is a service department and must be judged by the service it renders to the organization which is paying the bills.

Frankly one of the difficult things in educational work within business is to remember that the product of a "training department" is training just as clearly as that the object of a "sales department" is sales, more sales and better sales. Unless those responsible for the educational work can keep this point of view we can hope for but little real service to an organization. It is possible to keep this point of view and still coöperate with those who are responsible for immediate results in production or distribution.

If we are sure that the desired product is training—real training, more training and better training, then let us look to our machinery—our system. It takes one of rather generous temperament to speak glowingly of existing training systems. There are many existing excellent educational features, methods or experiments in many varied industries and organizations, but there are as yet no "corporation school systems" as there will be in progressive business organizations within the next ten years. It is not too early, however, to expect the experimental, the empirical work of the present to give evidence of a scientific shaping into a definite functional business unit or perhaps even into a recognized part of a more comprehensive educational system.

Existing training plans for employees at work may be broadly divided under four heads when their purposes are considered:

- (1) To teach a particular task.

Typical cases are the training of operators for one machine in a works in which there is a minute division of

labor, or the office worker, such as a filing clerk, involving a short series of closely related duties.

- (2) To teach a trade.

The training of apprentices as of machinists or printers.

- (3) To teach a business as a whole.

Where it is essential for those who are to accept responsibility in the direction of a business to have a broad knowledge of that business, its products, its methods, its markets, its policies and its personnel.

- (4) To teach subjects related to a task, a trade or a business.

Largely an opportunity for voluntary study as an aid in increasing present efficiency and preparation for advancement.

GENERAL IMPROVEMENTS

Let us consider a number of fundamentals applicable to any of the foregoing four needs, all of which, or any one of which may be the urgent present educational need of a business.

1. Organization and Administration Problems Are of Prime Importance

If they are fairly met at the beginning many subsequent problems are much more likely to be correctly solved. The fixing of definite responsibility for this sort of work pays as big returns as does similar definiteness in other phases of business. It is entirely too optimistic to hope for results by delegating supervision over educational work to one who is already busy on "regular work." The temptation to let things slide under the pressure of more tangible work is a real handicap. Not until an organization recognizes its training work on a par with other activities will it get real results. Arrangements for advisory council are essential to success, but it is better to have one man give his full time and his best thought and energy to the educational supervision problems of an organization than to have ten men giving a tenth of their time.

This carries with it too the recommendation that such a work be dignified by an organization unit title, which means its finances

should be handled as are those of any similar unit. This means at once that the work is established to get results.

Plans and records become a definite part of the system and no permanent success can be hoped for without them. It is essentially a long-time investment, and records are vital to the measuring of the returns as well as development of the plan. How else can we make a conscientious study of our mistakes?

2. Selection of Students

Without question the most vital single item (and the one in which there is room for definite improvement) is the securing of the right employees to train. Every step toward more definite training is a step toward more careful selection of employees. Here is a splendid opportunity for coöperation between the employment department and the educational department in the case of new people coming into organization or between the educational department and other operating departments when old employees are to be developed. Here again, the keeping of adequate records and using them is of utmost importance. Study of known successful employees is going to be our safest guide for the selection of new employees. No educational plans, however well organized or administered, can be successful without the right sort of human material to be developed. Many present difficult problems will automatically solve themselves when we give proper attention to this part of our problem.

3. Educational Methods

Knowing as we all do the great variations in native ability, as well as previous educational opportunity, we have been either careless or too optimistic in some of our plans. We still insist too much upon forcing our people to fit our plans rather than taking the pains and thought to make our plans flexible enough to fit the various needs of our people and our organizations.

Not until from most careful analysis and study we have set certain standards of achievement can we free much of our present training work of the element of time serving. Closer supervision and more intensive instruction are going to show us when we have achieved the results we are striving for, and at the same time point out the futility of mere time serving as an educational tool.

We need to know more about what to expect from certain

educational methods. We need to choose the method to fit the result expected. We are too careless in checking results. We hope, for instance, that our people get certain information through lectures, but if we check results we are almost certain to be disappointed. We need to be much more critical of our methods if we expect results from an educational viewpoint. Concrete problems and laboratory methods are much more worthy of our faith.

SOME SPECIFIC IMPROVEMENTS

1. *In Teaching a Particular Task*

No task, however trivial, is so unimportant that it is not worthy of thought and attention from the standpoint of instruction. In the smaller organization the danger is from the feeling that the number of people to be trained is small; therefore, its importance is underestimated. In the large organization there is such a great variety that the temptation is to feel that to make an attempt to instruct all new people is hopeless.

We must bear in mind the point that now we are expecting all new employees to learn their tasks practically without assistance. This is expensive, but how expensive and wasteful of time, material and effort can only be shown in comparison in concrete cases where better methods are used.

Where from six to fifteen new employees are being trained on fairly similar work, a full-time instructor can prove enough in savings to warrant his appointment. The instructor is responsible for the formation of proper work habits from the start. He discovers inaptitude or fitness for the task. He teaches some resourcefulness without the expensive wastes of the unsupervised method. He arouses interest in relation of a particular task to the work as a whole. He overcomes the hesitancy of the average new employee in asking for help. Working new people in groups tends to avoid discouragement on account of comparison of results with experienced workers before proper time has elapsed to gain proficiency.

Whether you have one or a hundred employees to "break in," definite decision as to the distinct ends to be accomplished and a record of the plan tried in their accomplishment will prove worth while.

2. *In Teaching a Trade*

The old plan of teaching a trade where the journeyman or foreman was considered responsible for instructing the apprentice, was simply a continuation or repetition of the indefinite plan of permitting people to learn a single task. It was always assumed that the period served would give the variety of experience.

There has been some tendency to swing entirely away from the old plan into a full time instruction shop, and there are a number of apprentice plans being worked on this basis at present. It was a natural conclusion to reach after so universal discouragement over the old method to meet present conditions.

The plan which at present gives greatest promise of results is one in which full responsibility is still given to the apprentice training department and they are held responsible alike for the initial instruction on particular tasks or machines, for experience in regular departments under normal shop conditions (as opposed to full time in a separate instruction shop) and for such related study as is considered necessary.

It seems fair to expect the most improvement in apprentice plans along this line. Some obvious advantages are the reduction in the amount of equipment in the school shop. The variety of equipment is necessary, but duplication is not necessary for the sole purpose of having equipment available upon which to practice to gain speed. A larger number of apprentices can be handled with a given investment in instruction equipment. A very close correlation between practice and study is possible. The alternate assignments throughout the course giving, first, school shop experience, and then the regular shop experience, will give the best knowledge of actual work problems and contact with workmen.

The full authority of the apprentice supervisor will give the opportunity to select productive work of the most value educationally.

3. *In Teaching a Business as a Whole*

More and more emphasis is being placed on the furnishing and placing of apprentices to gain a broader knowledge of a business than can be gained from experience in single department, or even a group of departments.

Offering a variety of experiences will aid in increasing the versatility of employees as well as their breadth. We can look for the biggest improvement when we study and analyze the experience to discover the best order of assignment. What seems the most logical from the standpoint of organization of the business, will not necessarily prove the ideal arrangement from an educational point of view.

It has been proven that it is much better to teach and give experience in assembly departments before assignment to work in process departments where work is done on isolated parts. The attempt to have a new employee, who has no general knowledge of your product, follow the process through from raw material to finished product, will prove expensive in time as opposed to the plan for acquiring the more general knowledge first.

In every organization there is much material already accumulated which, if made accessible and organized into a plan, may be made a productive force rather than an encumbrance to a file of records or correspondence. Starting with a company's own advertising matter a course of related study can be built up which will prove of value to the progressive employees who are interested in broadening.

A method which is coming into use is that of taking old employees from their regular duties and giving them instruction in groups on phases of the business which are related and considered essential to the best coöperation and results. Plans which are laid on strictly an educational basis with definite programs for every part of the work will bring results which often justify taking employees from their regular work for periods as long as six or eight weeks.

Definite intensive instruction with close checking of work done will pay as big returns with experienced and older employees as does similar effort with new people.

There are in every business certain fundamental things which it would be to the organization's advantage to have many of its employees know. There must be as definite plans to teach this general knowledge as the more specific knowledge of detailed tasks or trades.

4. *In Teaching Related Subjects*

In every business there are certain related subjects which are real working tools. Mechanical drawing for the ability it gives to read blueprints is almost a universal shop demand. Electricity and magnetism reaches very intimately into many businesses.

The big opportunity within business is to take these fundamentals, use concrete illustrations and problems from your own business and help your people to see how those fundamentals are interpreted in their every-day work. There are people in every organization anxious to fit themselves for advancement within a business by such study. The by-products of such a plan are large. The pupils profit, the instructors are better for it and the organization has discovered its progressive employees.

What May We Expect?

While better and more progressive efforts in our training plans for employees are not the panacea for all industrial ills, we may with confidence expect some very definite results.

They will show us both the cost and the value of systematic training and development of employees in business.

They will stimulate and aid efforts for the more careful analysis of work and employees for that work.

They will serve as a point of contact between public and corporate interests in all grades of education.

They will be a distinct factor in the reduction of "turn over."

They will serve as a most important factor in the advancement of democracy in industry.